GOVERNMENT OF ANDHRA PRADESH
A B S T R A C T

MA&UD - New initiative of Digital Door Numbering in ULBs of AP – Guidelines for Door Numbering in ULBs - Approved – Orders – Issued.

MUNICIPAL ADMINISTRATION & URBAN DEVELOPMENT (UBS) DEPARTMENT

G.O.Ms.No.232 Dated : 26-08-2019

Read:

From the Director of Municipal Administration, Guntur Lr.Roc.No.14034/1/2019/K Sec (2126792/2019-K3), dated 25.01.2019.

****

O R D E R:

In the reference read above, the Director of Municipal Administration, Guntur has stated that the APMDP has taken up 'Digital Door Numbering' of all Buildings in all ULBs in Andhra Pradesh along with RDUS and base map preparation duly following the procedures and as such there is a need to issue Comprehensive Guidelines for assigning the Digital Door Numbers to the properties in the Municipalities and Municipal corporations and requested the Government to accord approval of the Guidelines.

2. Government after careful examination of the matter hereby approve the Guidelines for Door Numbering in Municipalities and Municipal Corporations as Annexed to this order.

(BY ORDER AND THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

J. SYAMALA RAO
SECRETARY TO GOVERNMENT

To
The Director of Municipal Administration, Guntur.
Sf/Sc

//FORWARDED BY ORDER//

RESEARCH OFFICER

ANNEXED TO G.O. Ms. NO.232, MA&UD (UBS) DEPARTMENT, DATED - 26-08-2019

Guidelines for Door Numbering for Urban Local Bodies in Andhra Pradesh

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1. INTRODUCTION:

(a) EXISTING PROVISIONS RELATING TO NUMBERING OF BUILDINGS

(i) **Under Section418 of Municipal Corporations Act, 1955 [adopted GHMC Act 1955],** the Commissioner, may, from time to time, with the sanction of the Corporation, determine the name by which any street shall be known, cause to put up or paint the name of the street and with the sanction of Corporation determine the number by which any premises shall be known and by written notice require the owner of any premises either to put or paint or number on such premises or the work shall be executed under the orders of the Commissioner duly collecting the charges from the owner.

(ii) **Under Section 201 Andhra Pradesh Municipalities Act, 1965**, the Commissioner shall cause a Number to be affixed to the door of every building. When a number has been affixed, the owner of the building shall be bound to maintain such number in a proper manner.

(b) Multiple uses of door numbers: House numbering is the system of giving a unique number to each building in a street or area, with the intention of making it easier to locate a particular building. House numbers are not only convenient for finding addresses but necessary for emergency responders to locate those in need, such as-

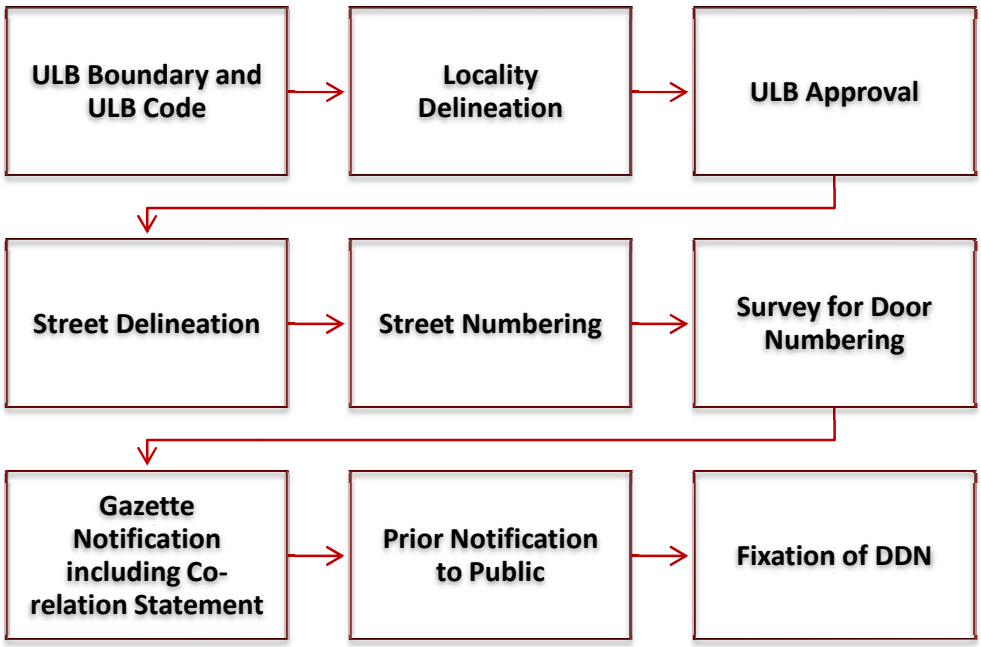
- To locate a building or land not used for agricultural purpose
- Assessment of buildings, lands to property tax and collection there of by ULBs
- Required for various permissions, licenses sanctioned by the Municipality
- To provide door number in postal address for easy identification of a building
- Required for filling up several categories of applications for education, employment, business, trade, opening of bank account, aadhar, identity card, registration of property etc,
- Preparation of Electoral rolls, population census.

2. ASSIGNMENT OF HOUSE NUMBERING (DDN)

(a) The aim of DDN for Urban Local Bodies in Andhra Pradesh is to assign the house number to the structure / land (open land) / developed plots to give identity in a scientific manner.

(b) The process involves different stages which include mapping and collection of GIS Base maps in the ULB, followed by the delineation of ***Localities*** and ***Main roads***, ***survey of properties***, preparation of ***street maps***, including ***identifying missing streets*** and assigning of ***new door numbers***, Preparation of Maps and ***Correlation statement for Old Door Numbering and New Door Numbering (DDN)***, *Gazette* ***Notification*** for new numbers assigned, Prior Notification to Citizens on date of ***Fixation of DDN.***

(c) Key Stages in Digital Door Numbering:



(d) Components of Digital Door Numbering Code:

C1, C2, C3, C4 are 4 components of the DDN code each denoting a city, area, street and building/dwelling.

The DDN can also be physically written as:

H. No - 234,

Street – 270,

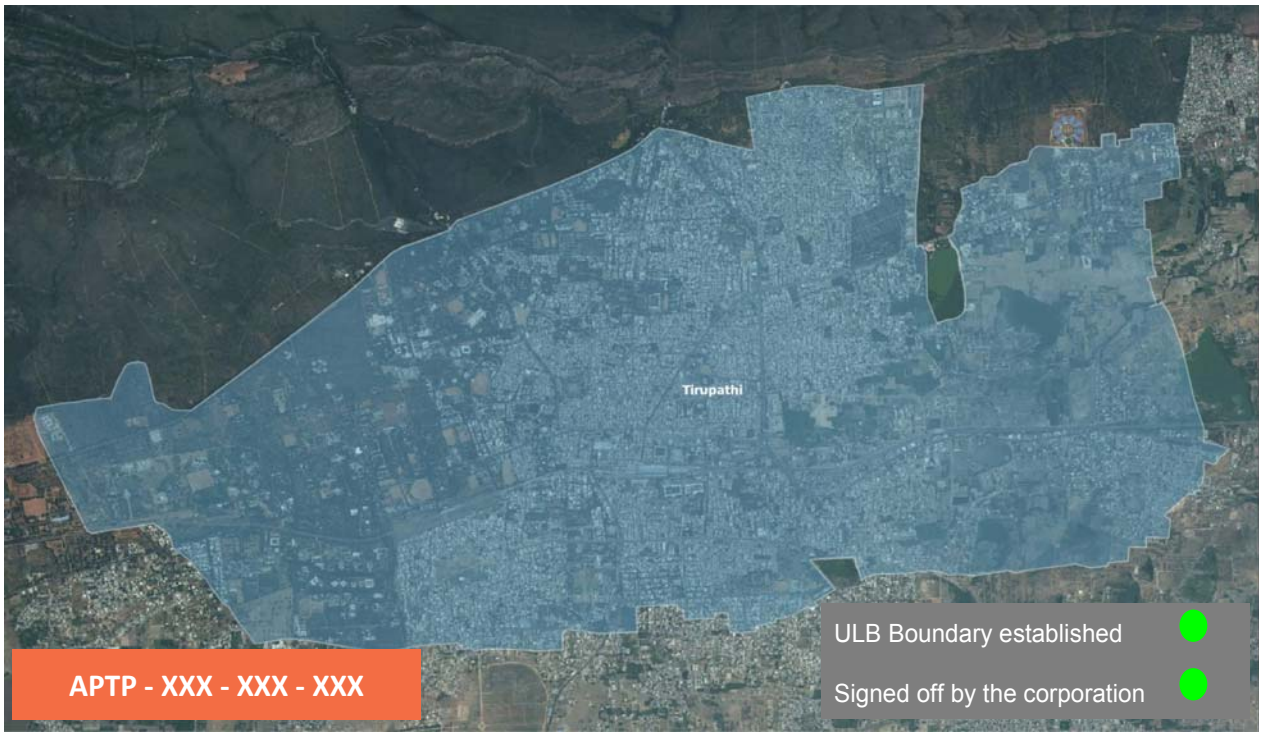
NGO Colony, Tirupati, AP

Thus, qualifying as a Digi-Physical System of addressing.

3. DEMARCATION OF ULB BOUNDARY AND ULB CODE GENERATION (C1):

(a) Using current base maps, ULB boundaries are defined and digitized in the GIS system

(b) Once ULB boundaries are Digitized, ULB code is defined as 2 characters, e.g. TP for Tirupati, the ULB code is then finalized as ***APTP*** (Andhra Pradesh, Tirupati)



4. DELINEATION OF LOCALITY BOUNDARY (C2):

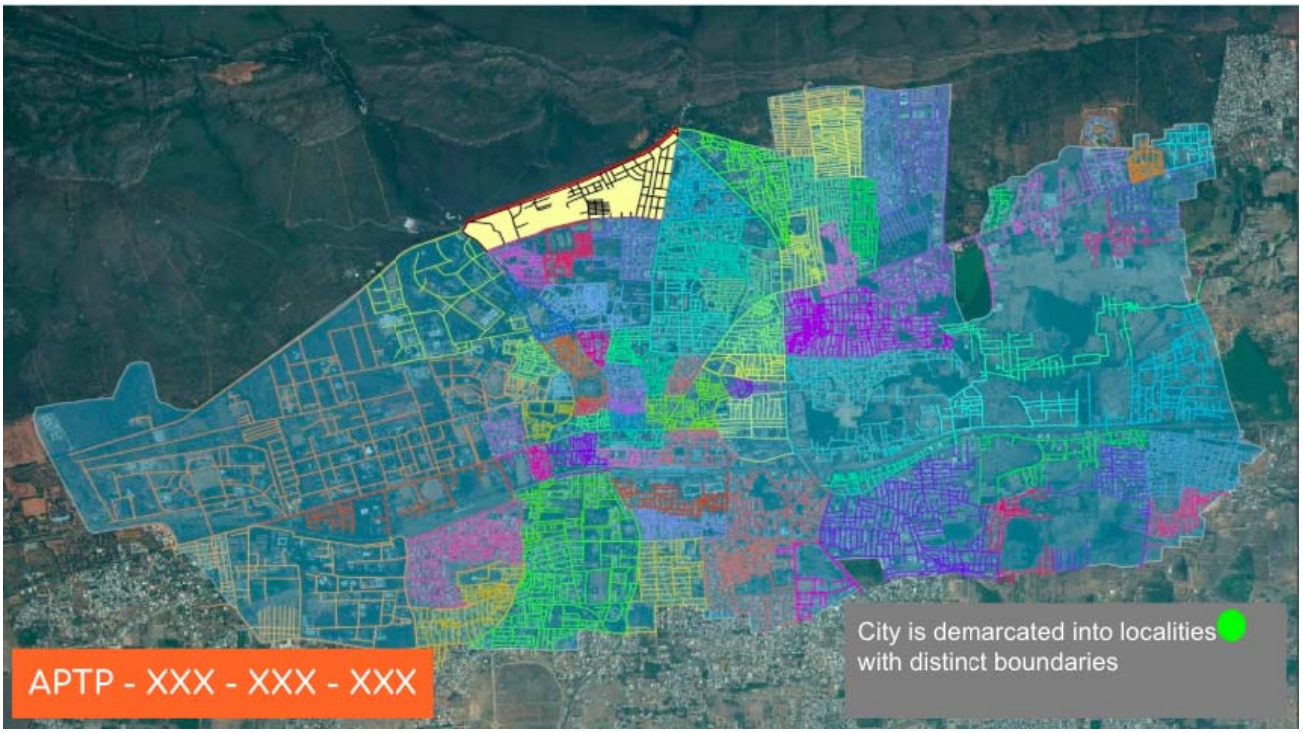
(a) Using existing Base map, the localities are delineated in coordination with the ULB Officers and also Town Planning officers in the ULB. The locality is viable in terms of area, population and has distinct boundaries based on the local importance and practice.

(b) Revenue ward boundaries are already part of base map and are part of meta data of the DDN.

(c) The locality is delineated with reference to municipal ward boundary, road network of all main roads and streets or known land marks like physical boundaries like watercourses, drains and railway lines etc.,

(d) The name of the area prominent with reference to Name of the Colony, Revenue Village, Post Office, Council ward etc. is assigned to the locality and a locality code with 3 characters is allotted to each locality. e.g. NGC (NGO Colony)

(e) While delineating the areas smaller colonies, slums that are locally known with reference to prominent locality name are included with the locality and comprehensive area is delineated.



5. DELINEATION OF ROADS/STREET:

(a) Using computer vision all streets are identified using Base Maps and latest satellite imagery

(b) Some missing streets/paths are also plotted using other available technologies

(c) All streets are categorized into the locality they fall in and a tree structure is created for every locality

6. DELINEATION OF MAIN ROADS AND STREET NUMBERING (C3):

(a) A single major road per locality is selected and then given the number 100

(b) All major roads in every locality are given the number 100

(c) All further 1st to nth level roads (sub-roads, feeder roads, alleys, etc) are given consecutive road numbers

i. E.g. Street ***200***, means 2nd main road

ii. E.g. Street ***270,*** means 7th sub-road in 2nd main road

iii. E.g. Street ***273***, means 3rd alley in 7th sub-road in 2nd main road

(d) Using Artificial Intelligence and Machine Learning, predictions for future developments and layouts are made, base on which street numbers are skipped for future use.

iv. E.g. Street 290 after Street 260, means the system as predicted future layouts basis availability of land and future growth, thus, making street numbering intuitive and future proof

7. DELINEATION OF DOOR NUMBERING (C4):

(a) A Surveyor is given the task to go to every property and using a mobile application geo-tag the main entry of the property and collect the following:

i. Picture of property
ii. Old house number
iii. Type of property (residential/commercial)

(b) The geo-tag of the main entry is critical to give the correct house/property number

(c) Numbering Scheme Explained:

i. Every street is further divided into 100meter segments
ii. And each segment is further divided into 1.5m access points along the length of the road/street
iii. Each access point defines the property number
    a. E.g. Ho.No:***234, is the 34th access point in 2nd 100 meter segment of Street 270***
iv. All numbers are placed in an EVEN || ODD format, all numbers to the left are Even and on the right are Odd
v. For units or dwellings within a house, a 3 character unit number is given

8. CORRELATION STATEMENT

(a) The Correlation statement as given at Table: 1 has to be prepared for every locality in the ward and to be submitted to ULB for approval.

(b) While assigning the numbers to the houses (Premises) and units, the correlation statement in Table:1 showing the old and new house numbers, name of the owner, no. of floors, usage of the building / units etc. are to be collected.

9. CHECK LIST FOR FILLING OF CORRELATION STATEMENT

(a) Name of the Locality, Code and Main Road Name, Code and Ward No. shall be noted clearly before going to the field survey by verifying Table – I

(b) In column no. 2, old house number shall be noted by contacting the Owner / Tenant by seeing the display board if available. (Or)

(c) In column no.3 , If old house number is not available adjacent house number shall be noted.

(d) In column No.4, new number will be assigned in odd/even series w.r.t. ground position and as per the procedure explained.

(e) In column no. 5, Name of the owner to be noted if available. (Or) If Owner Name is not available, mention as P.O (Property Occupied).

(f) In column no.6,7,8 and 9,Mention the number of floors of each of the following to be written C = No. of Cellar, S = Stilt, Floor; G = Ground Floor, U = No. of Upper Floors.

(g) In column no. 10, Number of units in each floor shall be counted and total shall be noted. Door lock cases, hut, etc. and any other shall be mentioned in remarks.

(h) Column. 11 Usage of premises shall be noted.

TABLE : 1

……MUNICIPAL CORPORTION/MUNICIPALITY/NAGARA PANCHAYAT

STATEMENT SHOWING THE CORRELATION STATEMENT OF OLD AND NEW HOUSE NUMBERS

WARD	LOCALITY NAME					MAIN ROAD NAME					
	LOCALITY CODE										
	STREET NUMBER					MAIN ROAD CODE					
S. No.	Old house number	If old house number is not available, neighbours house no.	New Premises Number	Name of the Owner	Category wise number of floors in the building				Total number of units in the building	Usage of the unit/ building	Remarks
					CELLAR	STILT	GROUND	UPPER			
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**

10.GAZATTE NOTIFICATION: NEW HOUSE NUMBER STATEMENT

(a) Based on the details filled up in Table: 1 [Correlation Statement of Old and New House Numbers], the 'New House Number Statement' as in Table: 2 have to be prepared in order to publish in the District Gazette.

(b) The 'New House Number Statement' [Table: 2] shall be placed before the Municipal Corporation / Council in order to determine the name and number by which the Main Roads, Streets and Premises in the ULB shall be known and for according necessary sanction.

(c) After sanction of the Municipal Corporation / Council, the 'New House Number Statement' [Table: 2] shall be published in the District Gazette.

(d) After receiving the objections / suggestions if any, the house numbering has to be finalized and same has to be informed to the public through a notification in newspaper that based on the gazette notification and on further consideration of the objections and suggestions received, the new house numbering is finalized and the new house number plates will be fixed from such date as may be feasible.

(e) After fixing the number plates, a written notice has to be given to the concerned resident duly informing the old house number and the corresponding new number and the expenses of such work involved and the method of payment of the amount.

(f) The date of commencement of new house numbers has to be published through newspaper and also all the concerned departments (e.g. Property tax section, Trade License section etc.) shall follow the same.

Table: 2

GAZETTE NOTIFICATION

…… [Name of the ULB]

NEW HOUSE NUMBER STATEMENT

In exercise of the powers conferred under Section of the Municipal Corporations Act, 1955 (GHMC Act, 1955), the New House Numbers are assigned with respect to the Old House Numbers as given below. The Public are requested to note the same and in case if they have any objection or suggestion with respect to the assignment of the house numbering the same may be submitted to the Commissioner, ULB on or before dd.mm.yyyy with reasons if any.

Sl. No.	Old House Number	New House Number	By Number (If any)	Owner's Name	Remarks
(1)	(2)	(3)	(4)	(5)	(6)

11.NUMBER PLATE SPECIFICATIONS

(a) Further to the Gazette notification approval, number plates are to be fixed to each and every Household as per the final map and gazette.

(b) **Specifications:** The matter for number plates is to be fixed as per following specifications.

(i) The number plates on each Property shall be fixed in a systematic manner. The size of the number plate shall be "**8.25 Inches in length, 6 Inches in width and 0.25 mm"** in thickness with letter and numbers printed.

(ii) In respect units of the Premises the number plate is ""**6 Inches in length, 4Inches in width and 0.25mm thick"**

(iii) The number plate of premises should contain Locality Name and Street Number in case of Locality Areas and in case of Main Roads Premises it shall contain the Premises Number and Main Road Name.

(iv) In respect of units of the Premises the details of Locality Name and Street Numbers and Main Road Names are not required.

HOUSE NUMBERING MODEL

Building/Premises Plate (8.25X6 Inches)

Unit Number Plate (6X4 Inches)

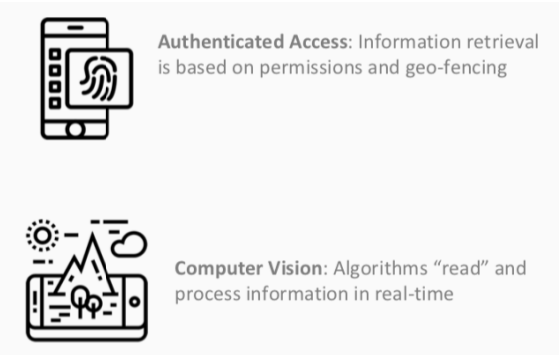
12.WAY FORWARD AND CONLCUSION

Since the DDN system is centrally managed by the CDMA/DT&CP, the objective is to support all ULBs in issuing DDNs for new properties, streets and other assets.

The following process is proposed and will be formalized:

- Every 3 months: ULBs send a consolidated list of new properties, streets, etc and their Geo-tags to the concerned officers at CDMA/DT&CP
- CDMA/DT&CP will issue corresponding DDN to the assets and sends back information
- Once approved CDMA/DT&CP will print the metal plates and send back to ULB for installation by ULB staff

13.IMPACT OF DDN INFRASTRUCTURE AND QR CODE


Authenticated Access: Information retrieval is based on permissions and geo-fencing
Computer Vision: Algorithms “read” and process information in real-time

a) ***Waste Management***

Authenticated door-to-door garbage collection using DDN smart board

b) ***Emergency Response***

Reduce fatality rates by up to 30% by routing emergencies to the door step with more clarity on reachability

c) ***Local Governance***

DDN's household communication network increases neighbourhood interactions, civic participation and creates hyper-local jobs

d) ***Town Planning***

Integrated system that can give addresses to all roads, drains, electrical networks and water lines across the city

e) ***Transportation***

Precise road network information helps guide transit investments and reduce traffic gridlocks

f) ***Public Distribution System***

Smarter and accurate verification of household-level subsidies (such as BPL ration cards, LPG)

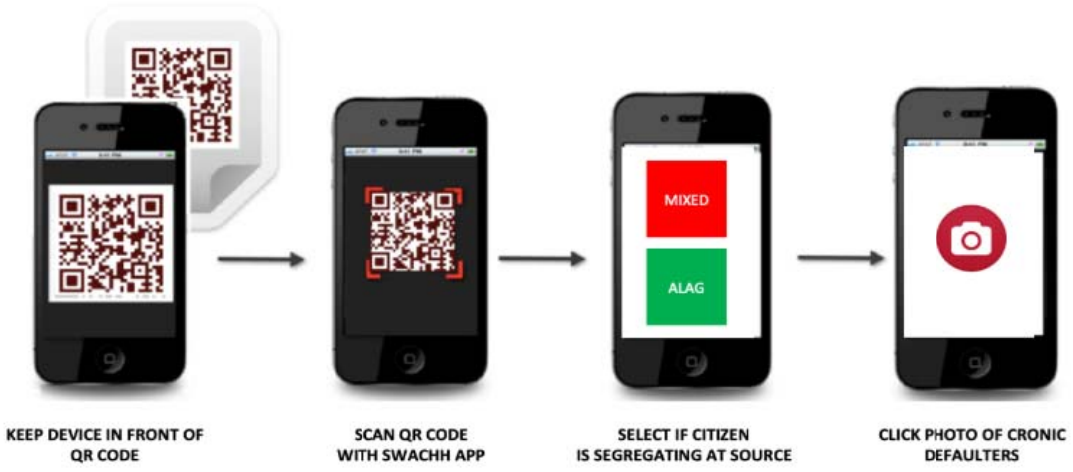
g) ***Boost Economic Activity***

Enable local businesses to identify delivery points easily for better and faster service delivery

h) ***Efficient Electoral Rolls***

Since the project is digitizing every street and home, electoral record keeping can be easier and cost efficient

Example of Usage for Solid Waste Management:


MIXED
ALAG
KEEP DEVICE IN FRONT OF QR CODE
SCAN QR CODE WITH SWACHH APP
SELECT IF CITIZEN IS SEGREGATING AT SOURCE
CLICK PHOTO OF CRONIC DEFAULTERS

- *Authenticate if a waste collector has collected waste (attendance system, using the DDN board)*
- *Same DDN board can be used for all other service providers (utilities, emergency services, Anganwadi, welfare scheme delivery)*

Reduce cost of managing waste by charging user fee *for authenticated waste collection or report house-holds that are not segregating waste*

ANNEXURES: REPORTS

Annexure 1:

APPRAISAL REPORT FOR THE NEW HOUSE NUMBERING SYSTEM

The team must be constituted with the Nodal officer of the ULB for conducting field verification and data checking including correlation statement. The team should follow the format suggested below for carrying out the appraisal.

Appraisal Report for New House Numbering System

1	Name of the Municipality		
2	Name of the Locality		
3	Locality Code		
4	Number of Major Roads		
5	Number of Streets		
6	Number of Premises in Locality		
7	Number of Units in Locality		
8	Number of Major Road Premises		
9	Number of Major Road Units		
		Status	Comments
A	Details of boundaries		
i	Boundaries of the Locality Identifiable boundaries (water body, hillock, main roads etc.)	North	
		South	
		East	
		West	
ii	Whether all the names and codes of adjacent localities are mentioned on the plan	Yes	
		No	
Iii	Is the Locality map is prepared as per the specified guidelines? If no indicate the reasons and deficiency	Yes	
		No	
B	Details of premises		
i	Whether all the premises (plot boundaries of existing structure/vacant plot boundaries.	Yes	
		No	
ii	Whether all the premises are marked new numbers in incremental series(Odd on one side and event on the other)	Yes	
		No	
iii	Whether the numbers are reserved in large vacant lands.	Yes	
		No	

		No	
C	Details of Streets		
i	Whether the Street numbers are unique in a locality	Yes No	
ii	Whether the entire street identified and given numbers and marked.	Yes No	
iii	Whether all the streets are colored as per specifications and indicated as per guidelines.	Yes No No	
D	Details of co-relation statement		
i	1. Whether all columns filled as per the guidelines.	Yes ☐ No ☐	
ii	2. Whether name and code of locality and street name and code are noted	Yes☐ No ☐	
E	General		
i	Whether the locality plan is prepared to the scale with legend and other details	Yes☐ No ☐	
ii	Whether the locality plan signed by commissioner and town planning officer	Yes☐ No ☐	
iii	Whether all the nodal points marked in plan	Yes☐ No ☐	

Consultant Project Head **Town Planning Officer** **Nodal Officer**

Annexure – 2

1. ULB Map Showing the Revenue Wards, localities & Main Roads

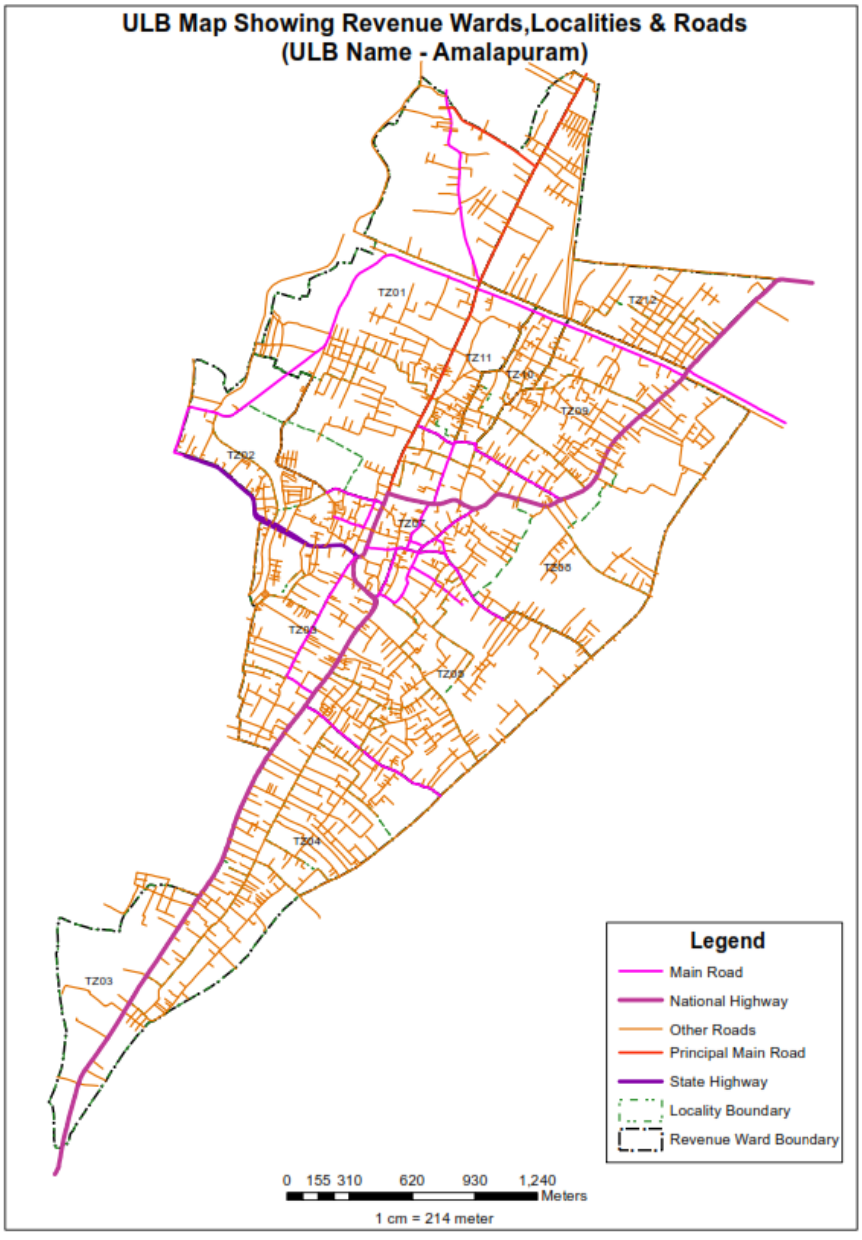
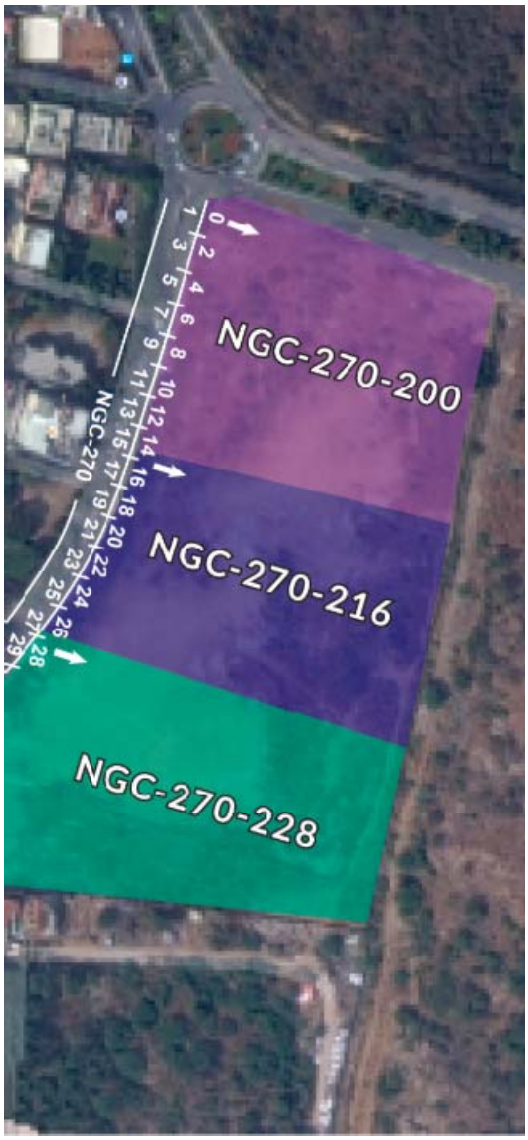


Fig.1

2. **House Numbering Map Showing the House Numbers in Main Road and Locality(Part map as example shown below)**



3. The House Numbering Map Shall Contain

(a) Boundary of the locality

(b) Mark the adjoining localities

(c) Show the main road stretches with codes.

(d) Show the streets with numbers.

(e) Show all the premises in Main roads and Locality

(f) Show the old house numbers with black color in the premises boundary.

(g) Show the new premises boundary in blue color with in a rectangular block

(h) Write names of the colonies, parks, other land marks and the names of the slums.

(i) In case, the scale doesn't permit the smaller or the congested areas with clear boundaries of premises, the same may be extracted and enlarged for clarity.

(j) Name of the Locality, Locality Code, Revenue Ward Map showing localities, the table showing the premises in ward wise shall be as per the template. (Table A,B,C,D)

TABLE-A: LIST OF LOCALITIES IN ULB

S.No.	LOCALITY CODE	NAME OF THE LOCALITY	AREA IN Sq. KM.
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE-B: DETAILS OF WARDS AND LOCALITIES IN URBAN LOCAL BODIES

Sl. No.	Revenue Ward No.	No. of Localities	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
Total:			

TABLE-C

STATEMENT SHOWING THE NO. OF PREMISES AND UNITS IN THE LOCALITIES IN REVENUE WARD No.													
Sl. No.	Locality Code No.	Locality Name	No. of Streets	No. of Main Roads (Stretches)	No. Premises in			No. of Units in			No. of Slums	No. of Premises in Slums	No. of Units in Slums
					Streets	Main Roads	Total	Streets	Main Roads	Total			
-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14
1													
Total													

TABLE-D

Floor Wise Data of Ward No….									
Locality Name	Ground Floor	G+1	G+2	G+3 & Above	C+G+1	C+G+2	C+G+3 & above	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

Consultant Project Head **Town Planning Officer / Nodal Officer**
Commissioner

RDMA **RDTP**